

Grant Application Submission Packet

Construction Document Reading – Instructor's Edition

Author: Robert A. Marmaduke, P.E., PEng. MIT-STAR

Contact: anthaethreesixty@gmail.com | TXT +1-360-447-8753 | Seattle, WA

Submission Date: February 2026

Intended Market: Community College and Trade School CTE Core Programs

Adoption Window: 2026–2027

CONSTRUCTION DOCUMENT READING



Robert A. Marmaduke PE

WHY ADOPT THIS TEXTBOOK FOR A GRANT APPLICATION?

Construction Document Reading: Instructor's Edition

- **Field-Tested & Classroom Proven**
Built directly from community college STEM/CTE instruction lectures and refined by New Media presentation in both HS and CC classrooms.
- **Meets Real-World Document Standards**
Covers permitting, civil workflows, BIM coordination, LEED criteria, PS&E, and code compliance through current construction practices.
- **Aligns with Media Literacy and AI-Era Curriculum Goals**
Uses visual storytelling, diagram annotation, and interpretive roleplay to prepare students for communication in trades and professional CTE.
- **Supports Entry-Level Trades and Academic Bridge Programs**
Suitable for both HS technical pathways and 2-year college transitions, emphasizing terminology, workflow comprehension, and document fluency. [Makesong Series](#)™ specializes in Reading & Writing literacy.
- **Modular, Activity-Based Instruction**
Features tasks, rubrics, and cartoon-style role-play scenarios that promote engagement and collaboration across diverse learning styles.
- **Ready for Institutional Procurement**
Designed to meet public-sector textbook adoption requirements; developed with STEAM alignment and scalable for other regional ESDs.

WHY THIS BOOK IS GROUND-BREAKING

Construction Document Reading: Instructor's Edition represents a breakthrough in CTE and STEM-aligned curriculum by combining real-world technical rigor with 21st-century media literacy tools. It is one of the first construction textbooks to fully integrate visual narratives, AI-era learning strategies, and interactive tasks that mirror the evolving communication demands of the modern jobsite.

This approach was informed by my work as author, editor and publisher of *Makesong Series*[™], one of the first AI-human collaboration projects in art and prose publishing. That experience directly influenced this textbook's use of hybrid learning methods—pairing classic drafting conventions with digital annotation, storytelling, and layered visual context—to foster deeper document literacy and workforce readiness.

As a successful STEM teacher for 'at risk' high-school students, my innovative CGI-enhanced student 'hands-on' lesson presentations enriched the State Math curriculum, and raised the school national Math test scores from 6% passing to the All-State average. Having experienced my own custom lesson plan design success, then the introduction of rote-memorization CCSS failure to engage students, I bring that high skill-set, together with many decades of professional engineering consulting, to this Instructor's Edition for a newly updated *Construction Document Reading*.

By bridging permitting workflows, BIM coordination, and LEED sustainability principles with illustrated narrative-based learning and media fluency, this book meets the moment for today's digitally proficient students and tomorrow's construction professionals, using a 'full immersion' presentation, *with top-quality professional engineering illustrations*.

There is no rote-memorization, only an expectation students will achieve fluency, ease, and feel technically-anchored and semi-proficient toward higher-level discipline courses.

MARKETING BUSINESS PLAN

Construction Document Reading: Instructor's Edition

I. MARKET CONTEXT: CTE TEXTBOOKS & VOC EDUCATION SALES

The U.S. CTE publishing market spans a diverse range of trade and technical fields, including construction, architecture, engineering, HVAC, electrical, and civil infrastructure. NCES and ACTE reports over 12 million students are enrolled in CTE programs, with approximately 1.5 million in construction- or engineering-related pathways across high schools, community colleges, and adult credentialing programs.

While traditional CTE core textbooks (e.g., drafting, construction management, IBC codes) dominate shelf space, few—if any—titles address document literacy in the media-rich, AI-driven learning environments students now inhabit. This textbook fills that gap.

Est. Annual U.S. Sales in CTE / AEC Education:

- Over 500,000 unit purchases (print and digital combined) across all disciplines
- Construction & Architecture-specific sales: 60,000–75,000 units annually
- Market trend: increasing demand for *hybrid learning formats* and *workforce-readiness framing*

Primary Buyers:

- High school adoption committees via regional ESDs (e.g., ESD 112)
- Technical high schools and CTE credentialing programs; Community colleges and dual-credit institutions
- School networks emphasizing Adult Workforce Training, media literacy, equity, and AI preparation

II. MARKET FIT: WHY THIS TEXTBOOK IS ESSENTIAL NOW

- **Anchor Text for Media-Literate, AI-Era Construction Education**
This textbook is the first to fully integrate media literacy, AI-era communication tasks, and visual narrative interpretation into the traditionally static field of construction documents.
 - **CTE-Aligned, STEM-Certified**
Authored by a STEM-certified instructor with decades of registered professional engineering and field experience, this is not a theoretical or academic approach—it is a lecture field-tested, standards-aligned instructional platform.
 - **Modular and Scaffolded - Across Learning Levels**
Designed for easy expansion from entry-level to capstone CTE courses, this Instructor's Edition scaffolds technical comprehension and fluency. It informs—and prepares students for—more advanced discipline-specific textbooks.
 - **Classroom-Proven with Active Learning Tasks**
Real-world relevance is maintained through cartoon-strip roleplays, plan-markup simulations, pre-development role-play, and simplified PS&E document exercises—all tested in active college classrooms.
-

III. PLATFORM POTENTIAL: GROWTH PATH & COMPANION MATERIALS

- **Digital Companion Modules** (*proposed 3-Module expansion*)
- **Student Edition** (simplified, workbook-oriented)
- **BIM & Trade Add-On Packs** (discipline-specific expansions)
- **Instructor's Media Toolkit** (for AI/media literacy integration support)
- **Updated Textbook** (incorporating new jurisdictional changes since 2018)

TABLE OF CONTENTS (sample chapter on request)

Construction Document Reading: Instructor's Edition

Preface – What Good Is Another Understanding Construction Document Book!?

Introduction – Daily Log of Instruction and Homework Record

1 – Where to Begin?

2 – Laying Out Construction

3 - Site Survey Drawings

4 - “Pre-Dev” Site Assessment

5 - Geotechnical Survey

6 - Civil Site Design

7 - Industrial Process Design

8 - Architectural Design

9 - Structural Design

10 – Mechanical Design

11 – Electrical Design

12 – Plumbing Design

13 - BIM Facilities Design

14 – CM/PM Contract Documents

15 – QA/QC/CQM Quality Metrics

16 – Final Exam Assessment & Grading Rubrics

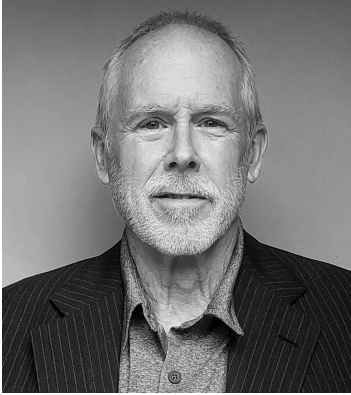
Congratulations!

Bibliography

Glossary

Table of Figures

Freehand Drawing Exercises



About the Author-Illustrator

Robert A. Marmaduke was born in Chicago, Illinois in 1950. He is the author of *Makesong Passage* and *Makesong Prestige*, companion ELA Reading & Writing Achievement books, and *MakeSong - Singing in Code*, as well as *Beginner's Guide to Understanding Construction Documents*.

An Engineering graduate of Cornell University, NY, certified in New Media at Vancouver Film School, BC, and as MIT-STAR Secondary Teacher at St Martin's College, Lacey, WA, Marmaduke has taught ESL as well as STEM & CTE in the US at HS and CC levels, before joining Makers of STEAM curriculum collaborative, Seattle, developing synth-vox programming for his code workbook *MakeSong - Singing in Code*, & 2018 [*Beginner's Guide to Understanding Construction Documents*](#).

A sought-after Professional Engineer, successful STEM Teacher and Workbook author-illustrator, all that inspired the Instructor's Edition, for an updated and revised *Construction Document Reading*.



"It is the ideas that are brought into fruition that are important. If they work then they become part of the culture, if they don't work, they become part of the learning." Robert Davidson